

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000594**Date Inspected:** 07-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi, Hua Li Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Caltrans mock up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Dan Hernandez was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up 89.00, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	Mock-Up 89.00, skin plate C			In Progress

Caltrans QA Inspector observed submerged arc welding (SAW) in progress at skin plate's mp510-1 and mp511-1 to mp512-1 MUSB-MA23 welds #1 and 3. The weld joints are Complete Joint Penetration (CJP) and Partial Joint Penetration (PJP), double bevel butt-joint. The welder is observed welding fill passes in the 1G position using a chipping hammer and wire brushing during interpass weld cleaning. The approved welder is identified as Mr. Wa Zhi Bing, welder stamp 049804. The welder is using welding procedure specification WPS-B-T-2221-B-U3C-S for the CJP weld and WPS-B-T-2321-B-P3-S for the PJP weld. Caltrans QA observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Sha Zhi and Bureau Veritas Inspector, Mr. Hua Li Wei monitoring welding activities at the workstation. Caltrans QA measured current welding parameters at approximately 750 amps, 34.6 volts and 580 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. SAW welding consumable is verified and identified as classification EM12K, JW-3, diameter 4.8 mm (.188 inches) using JF-B flux.

Caltrans QA Inspector observed ZMPC QC Zhong Dong Yun perform Magnetic particle (MT) inspection on root pass of skin plate's mp510-1 and mp511-1 to mp512-1. Inspected area appeared to be free of discontinuities.

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# WELDING INSPECTION REPORT

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## Summary of Conversations:

As identified within the contents of this report.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hernandez,Dan	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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